

Physiology-Anatomy A (P)

Description of Target Group

This course is designed for 11th and 12th grade students who are interested in pre-nursing and pre-medical careers.

Purpose

To provide the students information on the physiology and anatomy of the human body. Successful completion of Biology with a grade of C or better is recommended.

Standards of Expected Student Achievement

Upon completion of this course, students will be able to successfully demonstrate the following skills:

1. Define many associated fields of study, e.g., histology, pathology, etc.
2. Have an awareness and understanding of body planes and surfaces
3. Identify and describe the functions of the parts and organelles of a cell, e.g., mitochondria, lysosome, etc.
4. Differentiate between the types of tissues found in the body, e.g., smooth muscle, adipose, pseudostratified ciliated columnar epithelium.
5. Name the bones of the human skeleton.
6. Identify and describe the structures, both gross and microscopic, of skeletal muscle.
7. Identify the origin, insertion, and action of the approximately 50 muscles known as prime movers.
8. Identify and describe the functions of the parts of the neuron and the propagation of the action current and the transmitter chemicals at the myoneural junction
9. Describe the structure of the spinal cord, its meninges, and the spinal nerves and the routing of the reflex arc.
10. Locate and describe the major parts of the brain and list the functions located therein
11. Describe the structures involved in the autonomic nervous system and the effects of sympathetic and parasympathetic stimulation.
12. Identify and describe the locations and functions of the visceral and cutaneous receptors.
13. Describe the chemoreceptors in the aortic and carotid bodies; those involved in olfactory and gustatory senses.
14. Describe the structure and function of the parts of the human eye.
15. Be conversant with the visual abnormalities attendant with the human eye and possible corrections available
16. Describe the structure and functions of the parts of the human eye in hearing and equilibrium.

Instructional Materials

Text and Supplementary Materials

Refer to: Secondary Adopted Texts and Approved Supplementary Books Used in the Santa Maria Joint Union High School District

Activities

Learning approaches used in the course will be: lectures, participation in class discussion, demonstrations, experiments, films, field trips, etc.

Physiology-Anatomy B (P)

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1. Define many associated fields of study, e.g., histology, pathology, etc.
2. Have awareness and understanding of body planes and surfaces.
3. Identify and describe the functions of the parts and organelles of a cell, e.g., mitochondria, lysosome, etc.
4. Differentiate between the types of tissues found in the body, e.g., smooth muscle, adipose, pseudostratified ciliated columnar epithelium.
5. Name the bones of the human skeleton.
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